IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

DONNA J. THOMAS, ADMINISTRATRIX OF THE ESTATE OF ANDRE THOMAS, DECEASED, ON BEHALF OF THE ESTATE OF ANDRE THOMAS,	)	
Plaintiff	)	Civil Action No. 09-996
V.	)	Judge Nora Barry Fischer
BOROUGH OF SWISSVALE, DEBRA LYNN INDOVINA-AKERLY, JUSTIN LEE KEENAN and GARY DICKSON,	)	**JURY TRIAL DEMANDED**
Defendants	)	

DEPOSITION TRANSCRIPT EXCERPTS

OF

DEBORAH MASH, PH.D

EXHIBIT 1

TO

PLAINTIFF'S MOTION TO EXCLUDE EXPERT TESTIMONY OF DEBORAH MASH, PH.D. AND ANY EVIDENCE REGARDING AN ALLEGED CONDITION REFERRED TO AS EITHER EXCITED DELIRIUM, AGITATED DELIRIUM AND/OR DRUG-INDUCED DELIRIUM

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF PENNSYLVANIA
CASE NO 2:09 CV-00996-NBF

DONNA J. THOMAS, ADMINISTRATRIX
OF ESTATE OF ANDRE THOMAS,
DECEASED, ON BEHALF OF THE
ESTATE OF ANDRE THOMAS,
Plaintiff,
-vs-
BOROUGH OF SWISSVALE:
DEBRA LYNN INDOVINA-AKERLY;
JUSTIN LEE KEENAN; AND
GARY DICKSON,

Defendants.

AT: 1951 Northwest 7th Avenue
1st Floor
Miami, Florida 33130
Wednesday, August 3, 2011
1:00 p.m.

DEPOSITION OF DEBORAH MASH

Taken before Rochel Albert, CSR and Notary Public in and for the State of Florida at Large, pursuant to Notice of Taking Deposition filed in the above cause.

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specifically at Harvard?
A Yes.
Q Do you get a certificate or something for that?
A No, you do not.
Q Were you -- was this study as part of a program at Harvard in the School of Pharmacology or was it the School of Medicine?
A School of Medicine.
Q What is neuro-anatomy?
A Neuro-anatomy is the study of the structure of the human brain.
Q I also note here that you have a Ph.D. in pharmacology, specifically neuropharmacology; is that true?
A Yes.
Q And you are not a physician?
A Yes.
Q You are not board certified in any capacity as a physician?
A Yes.
Q Could we agree, Doctor, that you, despite all of your credentials, which are pages of them, do not have the ability to diagnose the cause of death?

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A I never make a diagnosis of the cause of death, and I never diagnose, treat or prescribe. What I do is serve as a consultant to those who do.
Q Correct.
MR. PUSHINSKY: Excuse me. Howard had asked you about whether you are a physician, and you had answered in the affirmative. Is that because you were agreeing with his statements, not saying yes, you have those qualifications?
A To clarify for the record, I am not a physician. I am not licensed. And I do not diagnose, prescribe or treat patients.
Q You are a researcher?
A I am a researcher. An NIH funded researcher.
Q Yes, ma'am.
Your career has been spent on the study of neuropharmacology and neurological diseases of our population?
A I think to be succinct and for the record, I have been involved since 19 -- the middle of the 1980s on the study of specifically the human brain and behavior, working on a spectrum of disorders, encompassing both neuro-degenerative, like

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Alzheimer's and Parkinson's, all the way through to neuropsychiatric disabilities, which, of course, encompass drugs and alcohol as well.
Q It's a broad field. So I would like, if you could, for me to indicate for the record if we could divide things into percentages. The time that you spend as a researcher, what do you mainly study?
A Yes. I give one of my other credentials, which I didn't provide to you, which is listed there on the record. I am the director of the University -- I am the director and founder of the University of Miami Brain Endowment Bank. The UM Brain Endowment Bank is one of the largest postmortem collections of human brains, I think, in the world today.
This was something that I started in the '80s when I left Harvard and joined the faculty here. In that brain bank, there are neuro-degenerative cases, as well as neuropsychiatric. But what is pertinent to the work that we are going to do today together is that I hold one of the largest -- I believe I hold the only collection of postmortem specimens from putative cases of excited delirium.

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I have also been funded by the National Institute on Drug Abuse to study CNS mechanisms of cocaine-related sudden death. If you look at the listing of the grants that I have, I have been funded in that capacity for almost two decades now. And so I have also one of the largest collections of cocaine intoxication deaths, as well as cocaine-related deaths.
And that information, that body of work, over two decades is what lays the basis for the study and working towards diagnostic specificity for excited delirium as a neurological or psychiatric disorder.
Q Is it true then, because you separated out the brain -- I'm assuming these are slides, not actual brains?
A No, sir. It's a brain bank. It's a postmortem collection, not slides. We have slides. We have cryopreserved specimens, which are frozen specimens that are archived. We have also from certain brain cases that we have, we will have a toxicology report. We may have toxicology information. Certainly information about the cause of death. Death certificates.
So what the brain bank does, it's a bio

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some Alzheimer's centers, usually academic-based, research-based, university-based centers, that have a very good hit rate in terms of diagnosing accurately, and then other community-based physicians may have a lower rate. But yes, exactly the way you point out.

Q I will refer you, please, to deposition Exhibit Number 2, which is part of your file, which is the report that you created of Andre Thomas?

A Yes, sir.

(Plaintiff's Exhibit Number 2 was marked by the court reporter and retained by counsel.)

Q For purposes of the record, is this a report that you authored, ma'am?

A Yes, sir, it is.

Q Did you issue this report with the intention that the coroner would rely upon it?

A No, sir. When I serve as a consultant to medical examiners, which I do all over the United States, and actually Canada and Europe --

Q Sure.

A What I am asked to do is to conduct an analysis of the neurochemical pathology of the

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brain. So in other words, in these types of cases where there may or may not be an anatomic cause of death, there may or may not be an anatomic cause of death, in certain occasions, because I am known in the field as an expert on this topic, I will be invited to consult with medical examiners. And I have done that for decades here in Miami.

The medical examiner usually will contact me, describe the case, and ask me if I would be willing to accept a small piece of the tissue from the case to conduct these bio marker studies. We conduct them. We conduct them blinded for condition in the laboratory. They then get the results. We unblind and we look at it. And we ask sometimes the medical examiner to provide us back some supportive information.

This has been an emerging -- this is what I would call an emerging science. So we are working very much in a collaborative way with the medical examiner, and we provide him or her what we find. And then its up to him or her to either accept or reject that information in the context of their forensic toxicologic and pathological evaluation.

Q Okay. Thank you.

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My next question about Exhibit Number 2 here is that I don't see any opinion here from you about whether or not Mr. Thomas suffered from agitated delirium. Is there such an opinion in Exhibit Number 2?

A I have it on page two.

Q What does it say?

A It says that the review of the incident report for this case suggests that the decedent was suffering from drug-induced delirium prior to death.

Q Okay. But it doesn't say agitated delirium and it doesn't say excited delirium. What it says is that it suggests that the decedent was suffering from a drug-induced delirium prior to death?

A Yes.

Q I think what you just told me was that the opinion that Mr. Thomas was or was not suffering from agitated or excited delirium would be that of the coroner; is that true?

A Yes, of course. The coroner always has to make the diagnosis of cause and manner of death. What I am describing here is a potential mechanism to support that diagnosis.

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Q Like a blood test?

A Exactly.

Q Sending it out, correct?

A Before there was cholesterol tests, there was someone like me running these analyses to say, indeed, cholesterol might be a diagnostic marker.

Q My doctor telling me not to eat red meat, right?

A Somebody like me was in a lab. Some lipid biochemist was in there measuring cholesterol.

Q There are certain standards that you follow in order to reach that suggestion, right?

A Yes, sir.

Q Would you refer, please, Doctor, back to the first page, the last paragraph.

A Yes.

Q It says, we have demonstrated a marked increase in HSP1AB (less than 2.0 fold-change), in brain specimens from cases of excited delirium in subjects who had recorded elevations in core body temperature prior to death.

What does that mean?

A What that means is a heat shock protein is a bio marker.

Q I'm sorry. Heat?

A Heat shock protein is a bio marker for excited delirium deaths. If I may refer you to the Forensic Science International paper, Brain Bio Markers for Excited Delirium.

Q I have it, yes.

A This report was done in 2008. This article was published in 2009. And this is when we completed retrospective case control analysis, went back and revalidated all of the material that we had in our hands at the time. Eventually, I believe this case was included. It may be included in the study.

If you look to figure two --

Q It's in your file; is that right?

A Yes.

Q I will get it.

It's not in this file.

A You have to have this.

We didn't give him this?

MR. HAMILTON: No.

A He needs it. Where is the big stack of all the documents?

MR. MESSER: I have it, anyway.

A Good.

MR. PUSHINSKY: Let's make sure it's the

same one.

MR. HAMILTON: Just to clarify.

A Here you go. You can have that.

MR. HAMILTON: Howard?

A That just has the pretty face page.

MR. HAMILTON: To facilitate the reading of this -- I don't want to intrude on your deposition.

MR. MESSER: I have already read it.

MR. HAMILTON: I just want to make that an exhibit.

MR. MESSER: Okay.

(Plaintiff's Exhibit Number 3 was marked by the court reporter and retained by counsel.)

Q We are looking at Exhibit 3.

A Go to figure two and three.

Q Two and three?

A Yes, sir.

What we did is we actually had three methodologies when we were validating this. When someone gets hot, and in this case, purported cases of excited delirium --

Q Purported?

A Putative.

Q Okay.

A Could be or could not be. What we found was very consistent increases in heat shock proteins. They bump up. They increase. If you look at that, you look at controls --

Q What table are we at?

A Figure two. Start with that.

MR. HAMILTON: Figure two, not a table.

A Controls would be age-matched sudden death individuals, died from other causes unrelated to drugs or alcohol. Next to it would be cocaine intoxication.

MR. HAMILTON: It's a different page. She is looking at figure two on page E-17.

A Look underneath. It will give you the figure legends.

Q Got you.

A If you look at the top and the bottom panels, the top panel shows the control cocaine intoxication deaths. These are deaths that the medical examiner said died from the toxic effects of cocaine alone or cocaine in combination with alcohol.

EDs are cases where the medical examiner said these were excited delirium deaths. And they

had the phenotype of excited delirium. In the absence. Nobody looked at them this way before.

Q Sure.

A They would have phenotyped them and said, no anatomic cause of death, but they had all the behavioral sequelae that make us think --

Q Reported by outside observers?

A Correct. Going back to the 1850s.

So that was done with what is called an Affymetrix array. That is a high throughput screening technology that allows you to look at over 20,000 genes and look for genes that may be up or down regulated. What we describe there is look at that increase. I mean, that's a very big increase. But you see the error bars on that? And it shows you the spreads.

Q What does it show? Increase in body temperature correlated with --

A No. That's heat shock proteins. In other words, it's a protein that is in our brain. It's in our body, too. It's in every cell.

Q Right.

A When you look at the mRNA, the RNA that makes the protein, or you look at the protein, which is a different figure here, you see what is

A I would have to go back into the laboratory notebooks and look. But I know for a fact that he was above three fold.

Q He was above?

A Three-fold elevated. We actually use him now as a control -- as a positive, what I would call a positive control.

Q Why?

A Because you want -- each time you run an assay, you want to make sure that you have got ones that you can repeat again and again and again, and you get the same value, and he runs very reliable on the QPCR at the higher level.

Q Is that an accepted medical test that is conducted routinely in various pathological laboratories to determine the core temperature of a body before death?

A It's a very routine assay. What you are asking me, is it a diagnostic assay? No. Hopefully, it will move towards that direction in the future, and that is why this science is an emerging science for forensic biology. But anyone can run that test. You need a PCR machine, you need to be able to isolate RNA out of frozen tissue, and you can analyze it.

Q So if I understand the answer to your question, the protocol that you used in figure two and figure three are not accepted medically?

A They are -- I am not sure what you mean accepted medically. People accept --

Q As a diagnostic tool.

A No. They are not something that the insurance company will pay for as a diagnostic tool. They are standard, routinely used assays. QPCR is a very accepted assay, and in fact, QPCR is used routinely in medicine, and it is also used in forensics. That is how you can look for DNA and DNA changes. And that is used all the time.

So the methodology -- to be precise, the methodology that is used, isolating RNA, quantifying the RNA and running it on these machines, that methodology is routinely used in hospital and medicine and forensic based practice.

Q But not for this purpose?

A We don't have a diagnostic yet for excited delirium. So this is a measure which has validity in the context of an emerging science. In order for it to move -- as I said to you before, the example here, same thing with diabetes and insulin, before there was an insulin test, which

became a pin trick test, there was someone in the laboratory measuring insulin, like me. And that science emerges, and then it moves from the laboratory to become a diagnostic.

One of the things that we are doing in the course of my research -- and this is why it's very important to have collaborations with medical examiners -- is that we are actually trying to move it towards what you just described. You acknowledge a deficiency in this protocol, and you are correct.

What we want to do is to move it to a good lab practice protocol which can be done routinely, where we actually could even perhaps sell the test kit to any medical examiner anywhere. And we are actually doing that right now. We are making a series of plates where any medical examiner could come in with a PCR machine, spot the RNA on it, have positive control tissues from the archive of RNA that we have, which we could provide to them, and they can do it.

Q Would you agree at this point that that is not an accepted protocol?

MR. HAMILTON: Object to form.

A I would say --

Q You can answer.

MR. HAMILTON: I don't know what that means.

Q Would you agree with me, based upon the testimony that you have just given, that that the protocol you have described based on figures two and three in Exhibit 3 are not accepted protocols for the diagnosis of diseases?

A That is a very broad question. So what I will say again is, the best way that I can answer that is these are accepted protocols. The methodology is accepted.

Q Methodology is accepted. Will you tell me what is not accepted?

A Okay. What I said to you is this is not a diagnostic in the same way that measuring cholesterol or doing a white blood cell count, something that would be done, in other words, in a clinical -- what you are trying to distinguish here, what would be done in a clinical chemistry laboratory where our insurance would pay for it. No. We are not there yet with this technology.

Are the methods that I used in this valid methods used routinely in medicine and forensic medicine and laboratory medicine? Yes, they are.

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Q So what I understand your answer to be is the methodology is accepted, but the technology does not exist so that the results would be accepted diagnostically; is that true?

A Yes. Because in order to do that, you would have to have a much larger statistical sampling. In other words, we have -- I think we report 90 cases here, which is the largest cohort that we have. When you move to a clinical diagnostic measure, you need population-based studies, and those are going to be on the order of thousands of patients.

That is what gets you published in journals. The JAMA and New England Journal of Medicine, you have 1,000 patients. So that would require kind of a national consortium of people interested in participating in this to provide specimens to be run not only in my laboratory, but to be validated in other people's laboratories, independent of the work that I do. And part of my NIH project is to provide those.

Q So you are not opposed to that happening?

A Not at all.

Q In fact, you would encourage that happening?

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A And I have. And that is why as part of the research and the recognition of two major national organizations, both the National Association of Medical Examiners, who have invited me to speak in their national meetings, as well as the American College of Emergency Room Physicians, to begin to start to move towards understanding that we do need an archive of these specimens, and that these need to be shared and validated and cross validated.

Q And that validation process would involve not only yourself doing research here at the University of Miami. It would involve other researchers throughout the United States doing similar types of validation mechanisms on a broad range of the population?

A Yes, sir. To that end, I collaborate with investigators at the National Institute on Health, because one of the big pushes for this research now, which I think could move us towards a forensic biology diagnostic, which would be larger than what I can do in my own laboratory, would be to look for a gene, a genetic -- to really describe for the first time the genetic underpinnings of this disorder.

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Q Of agitated delirium?

A Or excited delirium or Bell's mania, cocaine-related excited delirium.

Q I read it. I did read that. 1850 or so.

A 1850 or so.

Then we would have a gene or perhaps a gene-gene environment interaction that we could then use to help guide this process.

Q And that would be the ultimate validation?

A It would be the ultimate validation, something I would be very excited to participate in.

Q How far away from that do you think we are? How many years --

A It's a great question. The question was how many years are we away from it and I say it's a great question. I am looking now in the context of my NIH-funded grant application towards candidate genes. And I think that I have some candidate genes that may be more robust markers that you can even do out of -- for example, you can then -- you wouldn't even have to look at the brain. You could just go from blood. You could go from tissue and look for this.

But again, my laboratory is smaller. So

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the NIH has the new toys, the new high throughput technologies were they can actually go zipping up and down the entire DNA, and we are in the process of looking at that.

How long? Would I tell you a year to two years until we get positive hits? Yes. But again, it's a numbers game. You have got to have, A, we are relying, as you pointed out, on a diagnostic impression of a medical examiner. We start with that. If he or she is wrong, then I have got an outliers in there.

Q It's a very complicated process.

A No. It's an iterative. It's an iteration on a curve. You are always going to see outliers. Even with a cholesterol test, for example, you can have somebody who is an outlier. I run super high cholesterol. I manufacture all kinds of cholesterol. Every one of my other cardiac markers are great. I am probably one of those women, those old ladies who makes a ton of cholesterol and doesn't die. So I am an outlier.

Q I am with you.

A If they look at my genetics, I am not going to fit in that risk profile. So there will always be outliers. But it becomes a numbers

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best mirrors the ICD 9 codes and the DSM will be excited delirium.

I have cases of where the medical examiner called it acute exhaustive mania, which was because there were no drugs in the system. Mirrors, looks identical, to this person that we are describing today, but no cocaine and no history of drugs on board. So the medical examiner would look to the literature to try to come up with a title, named it acute exhaustive mania, a la Bell's mania. So that makes it even more difficult because the terms keep changing.

Q On the bottom half of this page in Exhibit Number 5, there's some handwriting that says DM report says -- is that your writing, ma'am?

A No, it isn't.

Q Can you read it, please, if you can?

A It says chronic cocaine abuse.

Q And then there's DA/WIN. Are those the initials of your people?

A No. That's dopamine WIN. The WIN binding parameters are that -- in the what you see -- she's referring back to our laboratory results. That is all that is.

And then below it -- should I keep going?

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Q Sure.

A Below it says metoprolol. She wrote on board. DM said heat shock protein indicates drug-induced delirium. So I felt at the time of my review of this that this really was a case of excited delirium, that he fit the bill. Albeit he was an -- what I believed at the time when I reviewed this, is based on neurochemical findings, that he was in an earlier stage of this disorder. And I really felt that the metoprolol had to be taken into consideration in this case.

Q Okay.

A It's an interesting case.

Q Do you see on the left side of the page it says excited delirium, cocaine and overdose drug-free control parameters?

A Yes, sir.

Q Are these the norms?

A These would have been what we would have reported probably at the time that we did this assay. They may or may not agree with, more or less. They will be in the same range as what is in the publication. But this is an earlier -- remember, the paper was published in 2009 and these were probably going against the reference

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values I had at the time in the lab.

Q If we look at this excited delirium parameters, high affinity 3.7 plus or minus 0.2?

A Uh-huh.

Q And across from that it say 7.8 plus or minus one. Are these all standards or do these actually apply to Mr. Thomas?

A No. These, the bottom ones, are reference ranges. Yes, sir.

Q So none of this applies to any of the blood samples of Mr. Thomas, or brain tissue or anything?

A The ones on the bottom, no, sir. Those are reference ranges.

Q On both columns?

A Yes, sir.

Q The next page is AGONAL state form. Is this your form?

A It is my form.

Q And at the top it says information provided by A. Shakir, M.D. He is the medical examiner; is that right?

A Yes, sir.

Q You see -- is this your handwriting on this?

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A No, sir. My handwriting is at the bottom.

Q Do you know whose handwriting this is?

A I do not, sir.

Q Would the information that is contained on this form have been transmitted to you then by Dr. Shakir?

A It says on the form information provided by Dr. Shakir. So it would have come from his office, yes, sir.

Q Is that your handwriting, ma'am?

A Yes, sir.

Q It says taser, one probe, one shock with two probes?

A Yes. I was trying -- I think I was looking at the chart to try to see at the time. I didn't know how many taser clicks there were. And the only thing we got from the -- on that was just what was provided in the actual autopsy findings. I have never seen any of that information.

Q Do you get paid for doing all this?

A No.

Q This is free?

A No. I don't know if we -- sometimes we try to collect 750. It used to be 400, $500, 750. It's part of the -- I am trying to get some

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reagent costs back. We do this consult, basically. We underwrite it as part of the NIH.

Q Do you have a private company that does this?

A No, I don't.

Q So you send out a bill and you hope you get paid?

A Yes.

Q Got you.

A That was a -- I am saying yes. And we really -- the value added here is that this is very important to support. I feel that it's a privilege to be part of this analysis. It's a privilege to work with medical examiners, and I am privileged because I have an NIH grant to study excited delirium.

And the peer review has accepted excited delirium as a condition. I have been funded to do this for over 18 years. So the only way that we can do this is by the cooperation of working with medical examiners. And if not for them, none of this science would emerge.

Q I have been trying to figure out something as a layman. Why are they all men?

A Great question. That is a great question.

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MR. PUSHINSKY: We get paid for asking great questions.

A That is a $50,000 question. Come work in the lab with me. That is a $50,000 question.

Originally, when we began, Dr. Rutenberg, whose name you will see on some of these papers, came down from the Center for Disease Control, and came to Miami, and that is actually how I got pulled into these studies.

And Dr. Rutenberg says, we have no anatomic cause of death. We don't know why these people are going off on cocaine. Miami was at the front-end loading of the cocaine epidemic.

Q Imagine that.

A So we had more of these cases. And that is why the seminal publications were Dr. Wetli down the street at the medical examiner's office. Immediately, it suggested that these were disproportionately men. These were disproportionately larger men with bigger body masses, and frequently black males.

Q African-American men?

A Yes, sir. And so actually, my cohort study, we have more representative of black, white.

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Q Yes, I didn't see any of that published yet.

A Yes. But in the original work that I brought you, some of the original papers -- I brought you everything so you would have it. On the original paper that we did, it actually describes that they're disproportionately large, black men, that they are men.

So the question becomes what is going on here. One of the things that immediately comes to your mind is, okay, what gene is sitting on the Y chromosome or the X chromosome that could predispose, because, obviously, if women, we have two X chromosomes. So if we are carrying one bad gene, we can lose the effect of that one bad gene if we weren't carrying it on this side.

But if we are a male, and we have only got one X chromosome and that gene is sitting there, then that would give you a larger percentage of that falling out. And if you read my grant application, we are going after that.

Q Yes, because from the information that I have seen on the internet and so on, I have only seen two or three documented cases where somebody has actually said a female died of excited or

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agitated delirium.

A We have them and they are in my published report. You see the smaller percentage. I actually thought, is it something different? Are the men being handled different? Early on I asked the question, are men being treated differently than women? Are women who are in a state of excited delirium getting transported to the ER, while men are going into the police car and to lock-up?

And I thought one of the ways to look at this was to go to the ER and check the -- do a retrospective review of the ER records to see if I could find the women in the ER. They weren't there. I have never published this work. I should publish it. But we actual looked for gender differences in cocaine psychosis. Back then we called it cocaine psychosis and sudden death. Because certainly there are plenty of women smoking crack or using methamphetamine.

Q Yes, it's not only men that abuse drugs.

A No, sir. They are not. And I have reviewed cases of real -- what I believe are really well-described, phenotypically cases of excited delirium. It's very interesting because

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paranoia. If you look at somebody who is a crack abuser, they are going to be paranoid. That is common. We are not talking about paranoia in the context.

This is the Hulk Hogan syndrome. These are the ones that they don't respond to the taser. They don't respond to pepper spray before the taser. They don't respond to baton strikes. It takes three, four officers. They continue to struggle. They go, they go. They are impervious to pain. I already said that. They don't respond to verbal commands.

There's this issue that you can perhaps talk down psychiatric patients when you do crisis invention. If you think you have a psych patient who is becoming abnormal because he or she is not on medication, you can usually talk them down. You can usually calm them down a bit and say, I am here to help you. I am not going to hurt you.

In the case of excited delirium, even where you have recorded police episodes where the police are saying, I am here to help you, guy. Come on. Get out of the middle of the road, you are going to get hurt, they go off ballistic and they are not responsive to commands. So this is

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at the extreme end of the neuropsychiatric continuum.

Q Got you.

A The question, do those survive, yes, cocaine psychosis, you survive. Paranoia in context, you survive. You get some medication and you are in the ER, you will calm down and you will be released.

Q Got you. I think I found what I wanted to. If you remember, you are the author of this Exhibit Number 3 called from the Forensic Science International, I believe.

Do you remember that, ma'am?

A Yes.

Q Subsequently to the publication of that article, there was a letter to the editor written by Dr. Gary M. Vilke, M.D. Do you know him at all?

A I do.

Q How do you know him?

A By reputation.

Q Wasn't he also on the committee with you on the White Paper?

A I believe so, yes.

Q He wrote in response to the publication of

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that article, and I am going to quote a sentence from his letter, which you can read.

MR. HAMILTON: I am going to object to the form.

Go right ahead.

Q Have you seen that letter before?

A I haven't looked at it recently. Yes, I read it.

Q What he says in this letter is this. Subjects in a state of excited delirium are seen every day in the emergency department across the country, but not all die. In fact, the majority do not. Best current published information, which includes the White Paper, I believe, is that the fatality rates in subjects presenting with excited delirium syndrome (EsDS) is around eight percent.

A May I see that?

Q So clarification should be made that the respiratory arrest, hyperthermia and death are not necessary components to define excited delirium.

MR. PUSHINSKY: Hold on one second.

MR. MESSER: I'm sorry. You're right. Let me go back. Wrong question.

Q This letter was written in response to Dr. Jauchem, J-A-U-C-H-E-M, article.

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A Which came out recently, which is more recent.

Q Yes, ma'am.

A It's a recent report, and that was in response to him.

Q I misquoted the whole thing. I withdraw that question.

A It's all right.

The issue that you raise is a very important one and valid one. It's what we are teaching everyone, saying please get the people to the ER. The bottom line is what Dr. Vilke, who is a fantastic clinician and well-regarded clinician -- if I may see that.

The review article by Jauchem I believe was from the Uniformed Health Services. I can be wrong. He might be an NIJ person. I don't have that paper here. But he wrote this is a very new review, and it's an incredibly exhaustive review. He makes from the retrospective case control review that he does in this paper, he makes the issue -- he raises the issue. His conclusion is, I should say, that they die.

Dr. Vilke is saying that they see them all the time in the ER and they don't die. My

understanding -- that may be his ER, where he works. My understanding from our ER where -- my emergency department here at Jackson where I actually went in with doctors, forensic investigators who were working for me at the time, and did the chart review, is that we didn't see that.

And I would be surprised by that because Miami was on the front-end loading of the description of excited delirium. So we got the EMS people to get them over there. And we didn't see this.

MR. HAMILTON: See what?

A Sorry. We didn't see --

Q Ninety percent survival.

A -- ninety percent survival. I think I would say with humility and respect for my colleague that the jury is out on this.

Q Even if it's 50 percent, that is still a lot of people, isn't it?

A The point is, you -- in order to say that the condition was excited delirium in the ER, he would have to do a psychiatric consult to screen out cocaine psychosis from true excited delirium. I don't think we are there yet. Right now, ED

syndrome is one that involves hyperthermia. We know if you control the hyperthermia, you are not going to die. That we know. Because the hyperthermia, that is probably the switch that puts you over the deep end.

One of the things that we get -- and again, how many people in society go through these excited delirium steps? Are there flicker episodes? And maybe what he is describing there is what we call a flicker episode.

I have actually been a consultant on cases where I went into court where there was clear evidence that someone had flicker episodes. Looked like excited delirium, but were not fatal. In this case, you may have the same thing with a flicker episode with a rhabdomyolysis episode.

Q You have been deposed before I take it?

A Yes.

Q How many times?

A On excited delirium?

Q Yes, ma'am.

A I would guess maybe 20 or 30.

Q Wow.

Here is the thing that I am wondering about. All my doctor buddies in cases tell me

that you medical people are trained to be good takers down of information. In other words, I would think that a person presenting to an emergency room with the symptoms of excited delirium would be documented accurately by a nurse, a physician or a physician's assistant in a better way than a police officer would do it. Would you agree with that or not?

A I think that medical professionals can identify and recognize a medical condition better than a police officer.

Q Is there anything that you question when you create the statistics and continue to study this situation that sort of bridges that gap? In other words, if a police officer, we can agree, I think, normally would not be trained in medicine and recording this type of symptomatology, how do we know that they are accurately portraying what is agitated/excited delirium?

Do you follow what I am saying? How can we rely upon a nonmedical provider to give us accurate information about the symptoms of a patient or a person?

A I think that you raise a valid point. I think that, however, what you do in this case is

you combine all the information that you have. So it starts -- if you look at the excited delirium checklist that I have --

Q We haven't gotten there yet. I think that is the last --

A I think it speaks to your question exactly.

Q Okay.

A We have developed this checklist and others have improved upon it. I think --

Q When you say we, who does that pronoun apply to?

A It was Dr. Wetli, myself and Dr. Cole and Dr. Karch were the original excited delirium checklist. Now it's on the internet. You can find it. People are using -- I believe it's getting used.

Q Everywhere. Okay.

A I don't know about everywhere, but it's getting used.

So when you look at this, this tries to help capture, understanding that the descriptions of the behavior may not be 100 percent, understanding that you are going to get bits and pieces, there may be differences in the reporting